PAC NOV M1035/019

From: Beth Ericksen
To: Dalley, Mike (Staker & Parson); kknoop@jbrenv.com; lmatthews@jbrenv.com
Date: 1/3/2008 10:30 AM
Subject: Response to Jan 2 2008 inquiry

Mike,

The inquiry document recvd Jan. 2, 2008 has been received and the following list or responses will hopefully assist in the effort to appropriately and effectively respond to the NOV. I have extracted the questions and repeated them in bold italics for ease of review.

Questions and responses to 1:

Did DOGM observe the highwall to be unstable or unsafe during inspection?
Reply: No in response to unstable highwall (No recent evidence of instability from a remote visual overview within a extremely limited time frame). Yes, it appeared unsafe (no catch benches, irregular bench faces, loose debris cover and see below comment).

(The upper lithologies do not appear to be benched and flattened as outlined in the plan. The Division does not have a copy of the IGES study and core anaylsis of 2005, which at the time of the plan was incomplete. The preliminary study of 2004 appears complete, but without the core study, it remains uncertain what the physical and engineering properties are for the south slope, so this information must be evaluated for design purposes. In addition, the plan mentions Phase I, but there is no map within the plan that labels an area Phase I)

Did DOGM believe the approved plan was not being followed?
Reply: Yes

Does DOGM believe the plan is not adequate?
Reply: Yes

Reply to 2.

Comment: It is not DOGM practice to provide a lengthy narrative when issuing violations. The condition and/or practice that can reasonably be expected to cause harm is the series of events outlined in the NOV.

Reply to 3:

Does DOGM believe that the approved plan is not being implemented? Reply: Yes, as stated in the NOV.

Does DOGM believe that the approved plan is ineffective? Reply: Historically, this plan was a few years in the works, and within its context, the stability work remained incomplete. The expected overall slope angle of 58 degrees appears to be based on preliminary studies, and not final detailed studies which may have included potential failure mode analysis. Several questions remain that may be answered within the context of the final study. There is concern when the preliminary study appears to based on only one factor, site observations. (without seeing the report, this is somewhat uncertain). The plan does not identify the slope heights nor lengths, no bench face width, no bench face angles, and no information about the slope design configuration. This study information is requested, especially the core information for the 2 drilled cores. How were they drilled, what depth, orientation, declination, and general location. Even though a safety factor range has been provided, what is the probability of failure?

Furthermore, figure 6 of the plan shows the 58 degree angle measured from a point other than the toe of the slope, and for accuracy, it should be measured from the toe. It is really as simple as drawing the line behind the slope versus in front of it to show the overall slope angle and have it be accurate. The shown angle, at first glance actually appears to be a bench face angle.

Reply to 4. Comment: The slope is not currently being utilized, but has been mined in the past. To demonstrate the area is environmentally safe and stable, a monitoring plan should be developed and implemented. ***To what end?*** Reply: The outcome of the plan is to ensure the highwall is safe and stable. There are all sorts of phenomena that require monitoring in this area and are influencing factors on slope stability. For example, it may be important to consider the impact of blast vibration on stability of the area, so the monitoring plan should include consideration of its influence. Other phenomena include displacement, ground water levels, rainfall (meteoric events), and other vibrations.

If further clarification is necessary, please contact me by telephone so we can discuss.

Beth Ericksen
Oil Gas and Mining
801 538 5318